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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,833	03/19/2004	James T. Frazer	GRIB-131US	7127

26875 7590 07/14/2005

WOOD, HERRON & EVANS, LLP
2700 CAREW TOWER
441 VINE STREET
CINCINNATI, OH 45202

EXAMINER

KAUFFMAN, BRIAN K

ART UNIT	PAPER NUMBER
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3765

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/804,833

Applicant(s)

FRAZER ET AL.

Examiner

Brian K. Kauffman

Art Unit

3765

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 15-18 and 22-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-18 and 22-35 is/are allowed.
- 6) ☒ Claim(s) 1 and 36-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/18/04 & 6/1/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The examiner acknowledges that claims 2-14 and 19-21 have been cancelled.

Claim Objections

Claim 22 is objected to because of the following informalities: on line 15, "first" should be replaced with "second". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 36-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Cash (5,509,365).

In regard to claim 1, Cash discloses a multi-needle quilting machine comprising a frame (12); a material drive selectively operable to move a substrate relative to the frame (col. 2, lines 60-63); a stitching-element bridge (20) selectively moveable relative to the frame, the bridge having mounted thereon a plurality of stitching elements, each operable to form a series of stitches on the substrate; a controller operable to control the operation of the material drive, the bridge and the stitching elements to stitch a selected pattern as the substrate and the bridge assembly are moving relative to one another, the controller being operable to selectively enable the formation of stitches when the substrate is moving relative to the frame and to selectively enable the

formation of stitches when the bridge assembly is moving relative to the frame (col. 3, lines 3-18).

In regard to claim 36, Cash discloses that the stitching elements are selectively operable relative to others of the stitching elements; and the controller is operable to control the operation of the stitching elements to sew series of stitches with some but not all of the stitching elements (col. 5, lines 49-65).

In regard to claim 37, Cash discloses that the controller is operable to control the operation of the material drive, the bridge and stitching elements to stitch a selected pattern to enable the formation of stitches when the substrate and the bridge assembly are both moving relative to the frame (col. 3, lines 7-15).

In regard to claim 38, Cash discloses that the stitching-element bridge assembly (20) includes two bridge assemblies (56 and 66) moveable relative to the frame, and each having mounted thereon a plurality of the stitching elements (col. 3, lines 9-10 and col. 4, lines 27-31).

In regard to claim 39, Cash discloses that the two bridge assemblies (56 and 66) are each separately moveable relative to the frame (col. 3, lines 9-10) and to each other (col. 5, lines 49-65).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 3765

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 40 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cash (5,509,365) in view of Schwarzberger et al. (5,782,193).

In regard to claims 40 and 41, Cash discloses that the stitching elements of the plurality include stitching elements selectively operable relative to others of the stitching elements (col. 5, lines 49-65); the controller is operable to control the operation of the stitching elements to sew series of stitches with some but not all of the stitching elements; and the controller is operable to control the operation of the main drive, two bridge assemblies and the stitching elements to stitch a selected pattern to enable the formation of stitches when either the substrate, one or both bridge assemblies, or the substrate and one or both bridge assemblies, are moving relative to the frame (col. 3, lines 7-15). Cash does not disclose that the material drive is operable to feed the substrate vertically in a vertical plane relative to the frame; that the two bridge assemblies are moveable vertically relative to the frame; and that the stitching elements each include a needle oriented horizontally perpendicular to the vertical plane.

Schwarzberger et al. do disclose that the material drive is operable to feed the substrate

Art Unit: 3765

vertically in a vertical plane relative to the frame; that the two bridge assemblies are moveable vertically relative to the frame; and that the stitching elements each include a needle oriented horizontally perpendicular to the vertical plane (col. 3, lines 4-10 and lines 42-66). Sewing a quilt in a vertical direction reduces the size of the floor space required by the quilting machine (col. 1, line 67-col. 2, line 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Cash's device by orienting the machine vertically as taught by Schwarzberger et al. in order to reduce the amount of floor space required by the machine.

Allowable Subject Matter

Claims 15-18 and 22-35 are allowed.

The following is an examiner's statement of reasons for allowance:

Claim 15 is allowed because it specifically requires stitching a first pattern with the rows of stitching elements while imparting a relative longitudinal movement in a net forward direction between the stitching elements and the substrate; then deactivating a first row of the stitching elements at a first set of final longitudinal positions on the substrate; then, with the stitching elements of the first row deactivated, further stitching the first pattern with a second row of the stitching elements while imparting additional relative longitudinal movement of a first given longitudinal distance in a net forward direction between the stitching elements and the substrate; then deactivating the second row of the stitching elements at a second set of final longitudinal positions on the substrate having a predetermined relationship to the first set of final longitudinal positions; then, maintaining the stitching elements of the first row at a first set of starting

Art Unit: 3765

longitudinal positions; then activating the first row of the stitching elements at the first set of starting longitudinal positions on the substrate; then with the stitching elements of the first row activated, stitching a second pattern with the first row of the stitching elements while imparting additional relative longitudinal movement a second given distance in a net forward direction between the stitching elements and the substrate; then activating the second row of the stitching elements at a second set of starting longitudinal positions on the substrate having a predetermined relationship to the first set of starting longitudinal positions; then with stitching elements of the first and second rows activated, further stitching the second pattern with the rows of stitching elements while imparting relative longitudinal movement in a net forward direction between the stitching elements and the substrate; whereby the first and second final longitudinal positions of the first pattern are less than the first given longitudinal distance apart and the first and second starting longitudinal positions of the second pattern are less than the second given longitudinal distance apart.

Claims 16-18 are allowed because claim 16 specifically requires stitching a first pattern with the rows of stitching elements while imparting relative longitudinal movement in a net forward direction between the stitching elements and the substrate, then deactivating a first row of the stitching elements at a first set of final longitudinal positions on the substrate; then, with the stitching elements of the first row deactivated, further stitching the first pattern with a second row of the stitching elements while imparting additional relative longitudinal movement a first given longitudinal distance in a net forward direction between the stitching elements and the substrate, then

deactivating the second row of the stitching elements at a second set of final longitudinal positions on the substrate having a predetermined relationship to the first set of final longitudinal positions; then, with the stitching elements of the first and second rows deactivated, imparting relative longitudinal movement in a net backward direction between the stitching elements and the substrate until the stitching elements of the first row are at a first set of starting longitudinal positions less than the given longitudinal distance from the final longitudinal positions of the first set; then activating the first row of the stitching elements at the first set of starting longitudinal positions on the substrate; then, with the stitching elements of the first row activated, stitching a second pattern with the first row of the stitching elements while imparting additional relative longitudinal movement a second given distance in a net forward direction between the stitching elements and the substrate; then activating the second row of the stitching elements at a second set of starting longitudinal positions on the substrate having a predetermined relationship to the first set of starting longitudinal positions', then, with stitching elements of the first and second rows activated, further stitching the second pattern with the rows of stitching elements while imparting relative longitudinal movement in a net forward direction between the stitching elements and the substrate; whereby, the first and second patterns are stitched on the substrate less than the given distance apart.

Claims 22-35 are allowed because claim 22 specifically requires quilting a first pattern on a substrate by stitching a first series of stitches of the first pattern with a plurality of the stitching elements of the first group while stitching a second series of

Art Unit: 3765

stitches of the first pattern with a plurality of the stitching elements of the second group; then deactivating the stitching elements of the first group and further stitching a second series of stitches of the first pattern with a plurality of the stitching elements of the second group; then, deactivating the stitching elements of the second group to complete the quilting of the first pattern on the substrate; and after deactivating the stitching elements of the first group, activating stitching elements of the first group and beginning quilting a second pattern on the substrate by stitching a first series of stitches of a second pattern with the plurality of the elements of the first group; then after the deactivating of the stitching elements of the second group to complete the quilting of the first pattern on the substrate, and after the activating of the stitching elements of the first group and the beginning of the quilting of the second pattern on the substrate, activating stitching elements of the second group and further quilting of the second pattern on a substrate by stitching a second series of stitches of the second pattern with the plurality of the stitching elements of the second group.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Landoni (4,501,208) discloses a process of bidirectional feeding

Art Unit: 3765

of fabrics in quilting machines. Codos (5,873,315) discloses a quilting machine.

Stutznacker (6,895,878) discloses a multi-needle quilting machine.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K. Kauffman whose telephone number is (571)272-4988. The examiner can normally be reached on M-F every week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Calvert can be reached on (571)272-4983. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BKK
7/8/05


JOHN S. CALVERT
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700